GenCore version 4.5

OM protein - protein search, using sw model

Run on: August 14, 2002, 10:50:38 ; Search time 75.95 Seconds
(without alignments)
45.336 Million cell updates/sec

Title: US-09-785-059-3
Perfect score: 176
Sequence: 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWLRVV 31

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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3: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1982.DAT:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	99	56.2	28	19	AAW47769	Antimicrobial pept
2	99	56.2	28	20	AAY32703	Antimicrobial pept
3	94	53.4	28	19	AAW47623	Antimicrobial pept
4	94	53.4	28	19	AAW47628	Antimicrobial pept
5	94	53.4	28	19	AAW47633	Antimicrobial pept
6	94	53.4	28	20	AAY32559	Antimicrobial pept
7	94	53.4	28	20	AAY32564	Antimicrobial pept
8	94	53.4	28	20	AAY32569	Antimicrobial pept
9	94	53.4	858	20	AAW30639	HIV-1-JC envelope
10	89	50.6	28	19	AAW47625	Antimicrobial pept
11	89	50.6	28	19	AAW47614	Antimicrobial pept
12	89	50.6	28	19	AAW47635	Antimicrobial pept
13	89	50.6	28	20	AAY32561	Antimicrobial pept
14	89	50.6	28	20	AAY32571	Antimicrobial pept
15	89	50.6	28	20	AAY32549	Antimicrobial pept
16	89	50.6	338	22	AAU14026	Peptide sequence f
17	89	50.6	345	21	AAB14536	HIV-1 isolate LAI
18	89	50.6	345	22	AAG63863	Amino acid sequenc
19	89	50.6	420	15	AAR53785	Translation of HIV
20	89	50.6	853	19	AAW43066	HIV-1 gp120 protei
21	89	50.6	856	14	AAR41025	Selectively deglyc
22	89	50.6	856	14	AAR41026	Selectively deglyc
23	89	50.6	856	14	AAR41027	Selectively deglyc
24	89	50.6	856	14	AAR41028	Selectively deglyc
25	89	50.6	856	14	AAR41029	Selectively deglyc
26	89	50.6	856	14	AAR41030	Selectively deglyc
27	89	50.6	856	14	AAR41031	Selectively deglyc
28	89	50.6	856	14	AAR41032	Selectively deglyc
29	89	50.6	856	21	AAY97072	Wild type HIV-1 HX
30	89	50.6	856	22	AAB45697	HIV-1/IIIB env clo
31	89	50.6	858	19	AAW43067	HIV-1 gp120 protei
32	89	50.6	863	13	AAR28955	Non-cleavable, sol
33	89	50.6	865	16	AAR73909	HIV-1 envelope pol
34	89	50.6	868	7	AAP60063	HIV virus env gene
35	89	50.6	868	7	AAP60422	Sequence of LAV vi
36	89	50.6	883	22	AAB82761	Ancestral HIV-1 gr
37	89	50.6	901	8	AAP70665	Sequence encoded b
38	88	50.0	844	19	AAW43073	HIV-1 gp120 protei
39	87	49.4	412	11	AAR05095	Synthetic HIV-1 tr
40	87	49.4	704	11	AAR05096	PSD302.PEP HIV-1 g
41	85	48.3	28	19	AAW47624	Antimicrobial pept
42	85	48.3	28	19	AAW47634	Antimicrobial pept
43	85	48.3	28	20	AAY32560	Antimicrobial pept
44	85	48.3	28	20	AAY32570	Antimicrobial pept
45	84	47.7	28	19	AAW47771	Antimicrobial pept

ALIGNMENTS

RESULT 1
AAW47769
ID AAW47769 standard; peptide; 28 AA.
XX
AC AAW47769;
XX
DT 26-MAY-1998 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS Synthetic.
OS Human immunodeficiency virus.
XX
PN US5714577-A.
XX
PD 03-FEB-1998.
XX
PF 24-JAN-1997; 97US-0786748.
XX
PR 26-JAN-1996; 96US-0010634.
PR 24-JAN-1997; 97US-0786748.
XX
PA (UYPI-) UNIV PITTSBURGH.
XX
PI Mietzner TA, Montelaro RC, Tencza SB;
XX
DR WPI; 1998-158352/14.
XX
PT Retroviral TM peptides - useful as antibacterial agents
XX
PS Disclosure; Column 19; 59pp; English.

XX
CC The invention relates to new antimicrobial peptides which correspond to
CC amino acid sequences in the transmembrane proteins of lentiviruses, in
CC particular HIV and SIV. These peptides comprise arginine rich sequences
CC which, when modelled for secondary structure, display high
CC amphipathicity and hydrophobic moment. Also disclosed are structural
CC and functional analogues and homologues of these peptides which also
CC display antimicrobial activity. The peptides are highly inhibitory to
CC microorganisms (bacteria, fungi, viruses and protozoa) but significantly
CC less toxic to red blood cells and other normal mammalian cells. Activity
CC is demonstrated against Gram positive and negative bacteria including
CC Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
CC Serratia marcescens.
CC The present sequence is one of 169 disclosed specific examples of
CC the new peptides. It is an analogue of the peptide designated LLP1
CC (see AAW47614) which is a peptide from the transmembrane protein (gp41)
CC of HIV strain HXB2R.
XX
SQ Sequence 28 AA;

Query Match 56.2%; Score 99; DB 19; Length 28;
Best Local Similarity 82.1%; Pred. No. 3.5e-06;
Matches 23; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
| ||||| ||||||| ||||||||| |
Db 1 rvirvvqgacrairhiprrirqglrril 28

RESULT 2
AAY32703
ID AAY32703 standard; peptide; 28 AA.
XX
AC AAY32703;
XX
DT 21-OCT-1999 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW growth inhibitor; microorganism; virus; gene therapy; vector production;
KW sterilisation.
XX
OS Synthetic.
OS Human immunodeficiency virus type 1.
XX
PN US5945507-A.
XX
PD 31-AUG-1999.
XX
PF 18-SEP-1997; 97US-0932682.
XX
PR 26-JAN-1996; 96US-0010634.
PR 24-JAN-1997; 97US-0786748.
PR 18-SEP-1997; 97US-0932682.
XX
PA (UYPI-) UNIV PITTSBURGH.
XX
PI Mietzner TA, Montelaro RC, Tencza SB;
XX
DR WPI; 1999-508189/42.
XX
PT Antimicrobial peptides useful for treating microbial infections
XX
PS Disclosure; Column 21; 62pp; English.
XX
CC This sequence represents an antimicrobial peptide of the invention, and
CC is an analogue of the peptide LLP1 (see AAY32549). The peptides can be
CC used for treating infections caused by Staphylococcus aureus,
CC methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus
CC faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in
CC a mammalian host. They can be used to inhibit growth of diverse
CC microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC and can be used in tissue culture to inhibit unwanted microbial growth,
CC particularly for the production of recombinant proteins or vectors for
CC gene therapy. They can also be used in preventing infections through the
CC sterilisation of wounds prior to suture and to sterilise surgical
CC instruments. The unique structure of these antimicrobial peptides
CC imparts high potency while selectivity is maintained, they are
CC moderately haemolytic but only lyse red blood cells at high
CC concentrations unlike melittin, a peptide extracted from bee venom, which
CC is highly active against bacteria and lyses red blood cells showing
CC little selectivity. The peptides target a membrane structure which makes
CC it more difficult for a microorganism to develop a mechanism of
CC resistance against this type of antibiotic. Their small size makes them
CC relatively simple to prepare by standard synthetic peptide chemistry.
XX
SQ Sequence 28 AA;

Query Match 56.2%; Score 99; DB 20; Length 28;
Best Local Similarity 82.1%; Pred. No. 3.5e-06;
Matches 23; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
| ||||| ||||||| ||||||||| |
Db 1 rvirvvqgacrairhiprrirqglrril 28

RESULT 3
AAW47623
ID AAW47623 standard; peptide; 28 AA.
XX
AC AAW47623;
XX
DT 26-MAY-1998 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS Synthetic.
OS Human immunodeficiency virus.
XX
PN US5714577-A.
XX
PD 03-FEB-1998.
XX
PF 24-JAN-1997; 97US-0786748.
XX
PR 26-JAN-1996; 96US-0010634.
PR 24-JAN-1997; 97US-0786748.
XX
PA (UYPI-) UNIV PITTSBURGH.
XX
PI Mietzner TA, Montelaro RC, Tencza SB;
XX
DR WPI; 1998-158352/14.
XX
PT Retroviral TM peptides - useful as antibacterial agents
XX
PS Disclosure; Column 9; 59pp; English.
XX
CC The invention relates to new antimicrobial peptides which correspond to
CC amino acid sequences in the transmembrane proteins of lentiviruses, in
CC particular HIV and SIV. These peptides comprise arginine rich sequences
CC which, when modelled for secondary structure, display high
CC amphipathicity and hydrophobic moment. Also disclosed are structural
CC and functional analogues and homologues of these peptides which also
CC display antimicrobial activity. The peptides are highly inhibitory to
CC microorganisms (bacteria, fungi, viruses and protozoa) but significantly
CC less toxic to red blood cells and other normal mammalian cells. Activity
CC is demonstrated against Gram positive and negative bacteria including
CC Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and

CC Serratia marcescens.
CC The present sequence is one of 169 disclosed specific examples of
CC the new peptides. It is an analogue of the peptide designated LLP1
CC (see AAW47614) which is a peptide from the transmembrane protein (gp41)
CC of HIV strain HXB2R.
XX
SQ Sequence 28 AA;

Query Match 53.4%; Score 94; DB 19; Length 28;
Best Local Similarity 78.6%; Pred. No. 1.5e-05;
Matches 22; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
| ||||| ||||||| ||||||| | |
Db 1 rvirvvqgacrairhiprrirqgleril 28

RESULT 4
AAW47628
ID AAW47628 standard; peptide; 28 AA.
XX
AC AAW47628;
XX
DT 26-MAY-1998 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS Synthetic.
OS Human immunodeficiency virus.
XX
PN US5714577-A.
XX
PD 03-FEB-1998.
XX
PF 24-JAN-1997; 97US-0786748.
XX
PR 26-JAN-1996; 96US-0010634.
PR 24-JAN-1997; 97US-0786748.
XX
PA (UYPI-) UNIV PITTSBURGH.
XX
PI Mietzner TA, Montelaro RC, Tencza SB;
XX
DR WPI; 1998-158352/14.
XX
PT Retroviral TM peptides - useful as antibacterial agents
XX
PS Disclosure; Column 9; 59pp; English.
XX
CC The invention relates to new antimicrobial peptides which correspond to
CC amino acid sequences in the transmembrane proteins of lentiviruses, in
CC particular HIV and SIV. These peptides comprise arginine rich sequences
CC which, when modelled for secondary structure, display high
CC amphipathicity and hydrophobic moment. Also disclosed are structural
CC and functional analogues and homologues of these peptides which also
CC display antimicrobial activity. The peptides are highly inhibitory to
CC microorganisms (bacteria, fungi, viruses and protozoa) but significantly
CC less toxic to red blood cells and other normal mammalian cells. Activity
CC is demonstrated against Gram positive and negative bacteria including
CC Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
CC Serratia marcescens.
CC The present sequence is one of 169 disclosed specific examples of
CC the new peptides. It is an analogue of the peptide designated LLP1
CC (see AAW47614) which is a peptide from the transmembrane protein (gp41)
CC of HIV strain HXB2R.
XX
SQ Sequence 28 AA;

Query Match 53.4%; Score 94; DB 19; Length 28;
Best Local Similarity 78.6%; Pred. No. 1.5e-05;
Matches 22; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
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Db 1 rvievvqgacrairhiprrirqglrril 28

RESULT 5
AAW47633
ID AAW47633 standard; peptide; 28 AA.
XX
AC AAW47633;
XX
DT 26-MAY-1998 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS Synthetic.
OS Human immunodeficiency virus.
XX
PN US5714577-A.
XX
PD 03-FEB-1998.
XX
PF 24-JAN-1997; 97US-0786748.
XX
PR 26-JAN-1996; 96US-0010634.
PR 24-JAN-1997; 97US-0786748.
XX
PA (UYPI-) UNIV PITTSBURGH.
XX
PI Mietzner TA, Montelaro RC, Tencza SB;
XX
DR WPI; 1998-158352/14.
XX
PT Retroviral TM peptides - useful as antibacterial agents
XX
PS Disclosure; Column 9; 59pp; English.
XX
CC The invention relates to new antimicrobial peptides which correspond to
CC amino acid sequences in the transmembrane proteins of lentiviruses, in
CC particular HIV and SIV. These peptides comprise arginine rich sequences
CC which, when modelled for secondary structure, display high
CC amphipathicity and hydrophobic moment. Also disclosed are structural
CC and functional analogues and homologues of these peptides which also
CC display antimicrobial activity. The peptides are highly inhibitory to
CC microorganisms (bacteria, fungi, viruses and protozoa) but significantly
CC less toxic to red blood cells and other normal mammalian cells. Activity
CC is demonstrated against Gram positive and negative bacteria including
CC Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
CC Serratia marcescens.
CC The present sequence is one of 169 disclosed specific examples of
CC the new peptides. It is an analogue of the peptide designated LLP1
CC (see AAW47614) which is a peptide from the transmembrane protein (gp41)
CC of HIV strain HXB2R.
XX
SQ Sequence 28 AA;

Query Match 53.4%; Score 94; DB 19; Length 28;
Best Local Similarity 78.6%; Pred. No. 1.5e-05;
Matches 22; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

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| ||||| ||||||| ||||||| | |
Db 1 rvirvvqgacrairhiprrirqgleril 28

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RESULT   6
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ID   AAY32559 standard; peptide; 28 AA.
XX
AC   AAY32559;
XX
DT   21-OCT-1999  (first entry)
XX
DE   Antimicrobial peptide LLP1 analogue.
XX
KW   Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW   growth inhibitor; microorganism; virus; gene therapy; vector production;
KW   sterilisation.
XX
OS   Synthetic.
OS   Human immunodeficiency virus type 1.
XX
PN   US5945507-A.
XX
PD   31-AUG-1999.
XX
PF   18-SEP-1997;   97US-0932682.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
PR   18-SEP-1997;   97US-0932682.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1999-508189/42.
XX
PT   Antimicrobial peptides useful for treating microbial infections
XX
PS   Disclosure; Column 9; 62pp; English.
XX
CC   This sequence represents an antimicrobial peptide of the invention, and
CC   is an analogue of the peptide LLP1 (see AAY32549). The peptides can be
CC   used for treating infections caused by Staphylococcus aureus,
CC   methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus
CC   faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in
CC   a mammalian host. They can be used to inhibit growth of diverse
CC   microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC   and can be used in tissue culture to inhibit unwanted microbial growth,
CC   particularly for the production of recombinant proteins or vectors for
CC   gene therapy. They can also be used in preventing infections through the
CC   sterilisation of wounds prior to suture and to sterilise surgical
CC   instruments. The unique structure of these antimicrobial peptides
CC   imparts high potency while selectivity is maintained, they are
CC   moderately haemolytic but only lyse red blood cells at high
CC   concentrations unlike melittin, a peptide extracted from bee venom, which
CC   is highly active against bacteria and lyses red blood cells showing
CC   little selectivity. The peptides target a membrane structure which makes
CC   it more difficult for a microorganism to develop a mechanism of
CC   resistance against this type of antibiotic. Their small size makes them
CC   relatively simple to prepare by standard synthetic peptide chemistry.
XX
SQ   Sequence   28 AA;


  Query Match             53.4%;  Score 94;  DB 20;  Length 28;
  Best Local Similarity   78.6%;  Pred. No. 1.5e-05;
  Matches   22;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

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Db       1 rvirvvqggacrairhiprrirqggleril 28


RESULT   7
AAY32564
ID   AAY32564 standard; peptide; 28 AA.
XX
AC   AAY32564;
XX
DT   21-OCT-1999  (first entry)
XX
DE   Antimicrobial peptide LLP1 analogue.
XX
KW   Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW   growth inhibitor; microorganism; virus; gene therapy; vector production;
KW   sterilisation.
XX
OS   Synthetic.
OS   Human immunodeficiency virus type 1.
XX
PN   US5945507-A.
XX
PD   31-AUG-1999.
XX
PF   18-SEP-1997;   97US-0932682.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
PR   18-SEP-1997;   97US-0932682.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1999-508189/42.
XX
PT   Antimicrobial peptides useful for treating microbial infections
XX
PS   Disclosure; Column 9; 62pp; English.
XX
CC   This sequence represents an antimicrobial peptide of the invention, and
CC   is an analogue of the peptide LLP1 (see AAY32549). The peptides can be
CC   used for treating infections caused by Staphylococcus aureus,
CC   methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus
CC   faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in
CC   a mammalian host. They can be used to inhibit growth of diverse
CC   microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC   and can be used in tissue culture to inhibit unwanted microbial growth,
CC   particularly for the production of recombinant proteins or vectors for
CC   gene therapy. They can also be used in preventing infections through the
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CC   resistance against this type of antibiotic. Their small size makes them
CC   relatively simple to prepare by standard synthetic peptide chemistry.
XX
SQ   Sequence   28 AA;


  Query Match             53.4%;  Score 94;  DB 20;  Length 28;
  Best Local Similarity   78.6%;  Pred. No. 1.5e-05;
  Matches   22;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
           | | |||  ||||||| |||||||| |
Db       1 rvievvqgacrairhiprrirqglrril 28


RESULT   8
AAY32569
ID   AAY32569 standard; peptide; 28 AA.
XX
AC   AAY32569;
XX
```

DT 21-OCT-1999 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW growth inhibitor; microorganism; virus; gene therapy; vector production;
KW sterilisation.
XX
OS Synthetic.
OS Human immunodeficiency virus type 1.
XX
PN US5945507-A.
XX
PD 31-AUG-1999.
XX
PF 18-SEP-1997; 97US-0932682.
XX
PR 26-JAN-1996; 96US-0010634.
PR 24-JAN-1997; 97US-0786748.
PR 18-SEP-1997; 97US-0932682.
XX
PA (UYPI-) UNIV PITTSBURGH.
XX
PI Mietzner TA, Montelaro RC, Tencza SB;
XX
DR WPI; 1999-508189/42.
XX
PT Antimicrobial peptides useful for treating microbial infections
XX
PS Disclosure; Column 9; 62pp; English.
XX
CC This sequence represents an antimicrobial peptide of the invention, and
CC is an analogue of the peptide LLP1 (see AAY32549). The peptides can be
CC used for treating infections caused by Staphylococcus aureus,
CC methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus
CC faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in
CC a mammalian host. They can be used to inhibit growth of diverse
CC microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC and can be used in tissue culture to inhibit unwanted microbial growth,
CC particularly for the production of recombinant proteins or vectors for
CC gene therapy. They can also be used in preventing infections through the
CC sterilisation of wounds prior to suture and to sterilise surgical
CC instruments. The unique structure of these antimicrobial peptides
CC imparts high potency while selectivity is maintained, they are
CC moderately haemolytic but only lyse red blood cells at high
CC concentrations unlike melittin, a peptide extracted from bee venom, which
CC is highly active against bacteria and lyses red blood cells showing
CC little selectivity. The peptides target a membrane structure which makes
CC it more difficult for a microorganism to develop a mechanism of
CC resistance against this type of antibiotic. Their small size makes them
CC relatively simple to prepare by standard synthetic peptide chemistry.
XX
SQ Sequence 28 AA;

Query Match 53.4%; Score 94; DB 20; Length 28;
Best Local Similarity 78.6%; Pred. No. 1.5e-05;
Matches 22; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
| ||||| ||||||| ||||||| | |
Db 1 rvirvvqgacrairhiprrirqgleril 28

RESULT 9
AAW30639
ID AAW30639 standard; Protein; 858 AA.
XX
AC AAW30639;
XX
DT 08-APR-1999 (first entry)
XX
DE HIV-1-JC envelope protein.
XX
KW Human immunodeficiency virus type 1; HIV-1; infection; AIDS;
KW chimpanzee; acquired immune deficiency syndrome; vaccine.
XX
OS Human immunodeficiency virus type 1.
XX
PN WO9859074-A1.
XX
PD 30-DEC-1998.
XX
PF 23-JUN-1998; 98WO-US12990.
XX
PR 04-SEP-1997; 97US-0057606.
PR 23-JUN-1997; 97US-0050548.
XX
PA (UYEM-) UNIV EMORY.
XX
PI McClure HM, Novembre FJ;
XX
DR WPI; 1999-105633/09.
DR N-PSDB; AAX03988.
XX
PT New isolated HIV-1 strains - obtained from chimpanzees infected with
PT HIV-1, used to develop products for the diagnosis, prevention and
PT treatment of AIDS
XX
PS Claim 13; Page 65-68; 120pp; English.
XX
CC The present invention describes human immunodeficiency virus type 1
CC (HIV-1) infectious clones, designated HIV-1-JC and HIV-1-NC. HIV-1-JC
CC and HIV-1-NC are useful for the preparation of recombinant, attenuated
CC and subunit vaccines, as well as for the preparation of challenge
CC stocks. They are also useful in screening for the presence of HIV in
CC biological samples. They can be used for inducing AIDS in a nonhuman
CC primate for the development of a drug or vaccine for the treatment or
CC prevention of AIDS. The present sequence represents the HIV-1-JC
CC envelope protein.
XX
SQ Sequence 858 AA;

Query Match 53.4%; Score 94; DB 20; Length 858;
Best Local Similarity 75.0%; Pred. No. 0.00046;
Matches 21; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

Qy 1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
| | |||| |||| || ||||||| |:|
Db 830 riievvqrlcrailhiprrirqglerfl 857

RESULT 10
AAW47625
ID AAW47625 standard; peptide; 28 AA.
XX
AC AAW47625;
XX
DT 26-MAY-1998 (first entry)
XX
DE Antimicrobial peptide LLP1 analogue.
XX
KW Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS Synthetic.
OS Human immunodeficiency virus.
XX
PN US5714577-A.
XX
PD 03-FEB-1998.
XX
PF 24-JAN-1997; 97US-0786748.
XX
PR 26-JAN-1996; 96US-0010634.

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PR   24-JAN-1997;   97US-0786748.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1998-158352/14.
XX
PT   Retroviral TM peptides - useful as antibacterial agents
XX
PS   Disclosure; Column 9; 59pp; English.
XX
CC   The invention relates to new antimicrobial peptides which correspond to
CC   amino acid sequences in the transmembrane proteins of lentiviruses, in
CC   particular HIV and SIV. These peptides comprise arginine rich sequences
CC   which, when modelled for secondary structure, display high
CC   amphipathicity and hydrophobic moment. Also disclosed are structural
CC   and functional analogues and homologues of these peptides which also
CC   display antimicrobial activity. The peptides are highly inhibitory to
CC   microorganisms (bacteria, fungi, viruses and protozoa) but significantly
CC   less toxic to red blood cells and other normal mammalian cells. Activity
CC   is demonstrated against Gram positive and negative bacteria including
CC   Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
CC   Serratia marcescens.
CC   The present sequence is one of 169 disclosed specific examples of
CC   the new peptides. It is an analogue of the peptide designated LLP1
CC   (see AAW47614) which is a peptide from the transmembrane protein (gp41)
CC   of HIV strain HXB2R.
XX
SQ   Sequence   28 AA;


  Query Match             50.6%;  Score 89;  DB 19;  Length 28;
  Best Local Similarity   75.0%;  Pred. No. 6.8e-05;
  Matches   21;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
           | | |||  ||||||| ||||||| | |
Db       1 rvievvqgicrairhiprrirqgleril 28


RESULT  11
AAW47614
ID   AAW47614 standard; peptide; 28 AA.
XX
AC   AAW47614;
XX
DT   26-MAY-1998  (first entry)
XX
DE   Antimicrobial peptide HIVHXB2R 828-855, or LLP1.
XX
KW   Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW   LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS   Human immunodeficiency virus.
XX
PN   US5714577-A.
XX
PD   03-FEB-1998.
XX
PF   24-JAN-1997;   97US-0786748.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1998-158352/14.
XX
PT   Retroviral TM peptides - useful as antibacterial agents
XX
PS   Disclosure; Column 5; 59pp; English.
XX
CC   The invention relates to new antimicrobial peptides which correspond to
CC   amino acid sequences in the transmembrane proteins of lentiviruses, in
CC   particular HIV and SIV. These peptides comprise arginine rich sequences
CC   which, when modelled for secondary structure, display high
CC   amphipathicity and hydrophobic moment. Also disclosed are structural
CC   and functional analogues and homologues of these peptides which also
CC   display antimicrobial activity. The peptides are highly inhibitory to
CC   microorganisms (bacteria, fungi, viruses and protozoa) but significantly
CC   less toxic to red blood cells and other normal mammalian cells. Activity
CC   is demonstrated against Gram positive and negative bacteria including
CC   Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
CC   Serratia marcescens.
CC   The present sequence is one of 169 disclosed specific examples of
CC   the new peptides. It is called LLP1 and corresponds to residues 828-855
CC   of the transmembrane protein (gp41) of HIV strain HXB2R.
XX
SQ   Sequence   28 AA;


  Query Match             50.6%;  Score 89;  DB 19;  Length 28;
  Best Local Similarity   75.0%;  Pred. No. 6.8e-05;
  Matches   21;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
           | | |||  ||||||| ||||||| | |
Db       1 rvievvqgacrairhiprrirqgleril 28


RESULT  12
AAW47635
ID   AAW47635 standard; peptide; 28 AA.
XX
AC   AAW47635;
XX
DT   26-MAY-1998  (first entry)
XX
DE   Antimicrobial peptide LLP1 analogue.
XX
KW   Antimicrobial; transmembrane protein; TM; lentivirus lytic peptide;
KW   LLP; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
XX
OS   Synthetic.
OS   Human immunodeficiency virus.
XX
PN   US5714577-A.
XX
PD   03-FEB-1998.
XX
PF   24-JAN-1997;   97US-0786748.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1998-158352/14.
XX
PT   Retroviral TM peptides - useful as antibacterial agents
XX
PS   Disclosure; Column 9; 59pp; English.
XX
CC   The invention relates to new antimicrobial peptides which correspond to
CC   amino acid sequences in the transmembrane proteins of lentiviruses, in
CC   particular HIV and SIV. These peptides comprise arginine rich sequences
CC   which, when modelled for secondary structure, display high
CC   amphipathicity and hydrophobic moment. Also disclosed are structural
CC   and functional analogues and homologues of these peptides which also
CC   display antimicrobial activity. The peptides are highly inhibitory to
CC   microorganisms (bacteria, fungi, viruses and protozoa) but significantly
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CC   less toxic to red blood cells and other normal mammalian cells. Activity
CC   is demonstrated against Gram positive and negative bacteria including
CC   Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
CC   Serratia marcescens.
CC   The present sequence is one of 169 disclosed specific examples of
CC   the new peptides. It is an analogue of the peptide designated LLP1
CC   (see AAW47614) which is a peptide from the transmembrane protein (gp41)
CC   of HIV strain HXB2R.
XX
SQ   Sequence   28 AA;


  Query Match             50.6%;  Score 89;  DB 19;  Length 28;
  Best Local Similarity   75.0%;  Pred. No. 6.8e-05;
  Matches   21;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
          | | |||  ||||||| ||||||| | |
Db      1 rvievvqgicrairhiprrirqgleril 28


RESULT  13
AAY32561
ID   AAY32561 standard; peptide; 28 AA.
XX
AC   AAY32561;
XX
DT   21-OCT-1999  (first entry)
XX
DE   Antimicrobial peptide LLP1 analogue.
XX
KW   Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW   growth inhibitor; microorganism; virus; gene therapy; vector production;
KW   sterilisation.
XX
OS   Synthetic.
OS   Human immunodeficiency virus type 1.
XX
PN   US5945507-A.
XX
PD   31-AUG-1999.
XX
PF   18-SEP-1997;   97US-0932682.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
PR   18-SEP-1997;   97US-0932682.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1999-508189/42.
XX
PT   Antimicrobial peptides useful for treating microbial infections
XX
PS   Disclosure; Column 9; 62pp; English.
XX
CC   This sequence represents an antimicrobial peptide of the invention, and
CC   is an analogue of the peptide LLP1 (see AAY32549). The peptides can be
CC   used for treating infections caused by Staphylococcus aureus,
CC   methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus
CC   faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in
CC   a mammalian host. They can be used to inhibit growth of diverse
CC   microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC   and can be used in tissue culture to inhibit unwanted microbial growth,
CC   particularly for the production of recombinant proteins or vectors for
CC   gene therapy. They can also be used in preventing infections through the
CC   sterilisation of wounds prior to suture and to sterilise surgical
CC   instruments. The unique structure of these antimicrobial peptides
CC   imparts high potency while selectivity is maintained, they are
CC   moderately haemolytic but only lyse red blood cells at high
CC   concentrations unlike melittin, a peptide extracted from bee venom, which
CC   is highly active against bacteria and lyses red blood cells showing
CC   little selectivity. The peptides target a membrane structure which makes
CC   it more difficult for a microorganism to develop a mechanism of
CC   resistance against this type of antibiotic. Their small size makes them
CC   relatively simple to prepare by standard synthetic peptide chemistry.
XX
SQ   Sequence   28 AA;


  Query Match             50.6%;  Score 89;  DB 20;  Length 28;
  Best Local Similarity   75.0%;  Pred. No. 6.8e-05;
  Matches   21;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
          | | |||  ||||||| ||||||| | |
Db      1 rvievvqgicrairhiprrirqgleril 28


RESULT  14
AAY32571
ID   AAY32571 standard; peptide; 28 AA.
XX
AC   AAY32571;
XX
DT   21-OCT-1999  (first entry)
XX
DE   Antimicrobial peptide LLP1 analogue.
XX
KW   Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW   growth inhibitor; microorganism; virus; gene therapy; vector production;
KW   sterilisation.
XX
OS   Synthetic.
OS   Human immunodeficiency virus type 1.
XX
PN   US5945507-A.
XX
PD   31-AUG-1999.
XX
PF   18-SEP-1997;   97US-0932682.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
PR   18-SEP-1997;   97US-0932682.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1999-508189/42.
XX
PT   Antimicrobial peptides useful for treating microbial infections
XX
PS   Disclosure; Column 9; 62pp; English.
XX
CC   This sequence represents an antimicrobial peptide of the invention, and
CC   is an analogue of the peptide LLP1 (see AAY32549). The peptides can be
CC   used for treating infections caused by Staphylococcus aureus,
CC   methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus
CC   faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in
CC   a mammalian host. They can be used to inhibit growth of diverse
CC   microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC   and can be used in tissue culture to inhibit unwanted microbial growth,
CC   particularly for the production of recombinant proteins or vectors for
CC   gene therapy. They can also be used in preventing infections through the
CC   sterilisation of wounds prior to suture and to sterilise surgical
CC   instruments. The unique structure of these antimicrobial peptides
CC   imparts high potency while selectivity is maintained, they are
CC   moderately haemolytic but only lyse red blood cells at high
CC   concentrations unlike melittin, a peptide extracted from bee venom, which
CC   is highly active against bacteria and lyses red blood cells showing
CC   little selectivity. The peptides target a membrane structure which makes
CC   it more difficult for a microorganism to develop a mechanism of
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CC   resistance against this type of antibiotic. Their small size makes them
CC   relatively simple to prepare by standard synthetic peptide chemistry.
XX
SQ   Sequence   28 AA;
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  Query Match             50.6%;  Score 89;  DB 20;  Length 28;
  Best Local Similarity   75.0%;  Pred. No. 6.8e-05;
  Matches   21;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
          | | |||  ||||||| ||||||| | |
Db      1 rvievvqgicrairhiprrirqgleril 28
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```
RESULT  15
AAY32549
ID   AAY32549 standard; peptide; 28 AA.
XX
AC   AAY32549;
XX
DT   21-OCT-1999  (first entry)
XX
DE   Antimicrobial peptide LLP1.
XX
KW   Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection;
KW   growth inhibitor; microorganism; virus; gene therapy; vector production;
KW   sterilisation.
XX
OS   Human immunodeficiency virus type 1.
XX
PN   US5945507-A.
XX
PD   31-AUG-1999.
XX
PF   18-SEP-1997;   97US-0932682.
XX
PR   26-JAN-1996;   96US-0010634.
PR   24-JAN-1997;   97US-0786748.
PR   18-SEP-1997;   97US-0932682.
XX
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Mietzner TA,  Montelaro RC,  Tencza SB;
XX
DR   WPI; 1999-508189/42.
XX
PT   Antimicrobial peptides useful for treating microbial infections
XX
PS   Example 1; Column 5; 62pp; English.
XX
CC   This sequence represents the antimicrobial peptide LLP1, and was used
CC   to design the peptide analogues of the invention. The peptides can be
CC   used for treating infections caused by Staphylococcus aureus, methicillin
CC   resistant S. aureus, Pseudomonas aeruginosa, Enterococcus faecalis,
CC   S. marcescens, Escherichia coli, fungi, protozoa and viruses in a
CC   mammalian host. They can be used to inhibit growth of diverse
CC   microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses
CC   and can be used in tissue culture to inhibit unwanted microbial growth,
CC   particularly for the production of recombinant proteins or vectors for
CC   gene therapy. They can also be used in preventing infections through the
CC   sterilisation of wounds prior to suture and to sterilise surgical
CC   instruments. The unique structure of these antimicrobial peptides imparts
CC   high potency while selectivity is maintained, they are moderately
CC   haemolytic but only lyse red blood cells at high concentrations unlike
CC   melittin, a peptide extracted from bee venom, which is highly active
CC   against bacteria and lyses red blood cells showing little selectivity.
CC   The peptides target a membrane structure which makes it more difficult
CC   for a microorganism to develop a mechanism of resistance against this
CC   type of antibiotic. Their small size makes them relatively simple to
CC   prepare by standard synthetic peptide chemistry.
XX
SQ   Sequence   28 AA;
```

```
  Query Match             50.6%;  Score 89;  DB 20;  Length 28;
  Best Local Similarity   75.0%;  Pred. No. 6.8e-05;
  Matches   21;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 RWIRVVQRWCRAIRHIWRRIRQGLRRWL 28
          | | |||  ||||||| ||||||| | |
Db      1 rvievvqgacrairhiprrirqgleril 28
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Search completed: August 14, 2002, 10:50:38
Job time: 344 sec